Application Number: T1-00004 **Scientific Score**: 84

Title: CIRM Stem Cell Biology Training Grant

Specific names of individuals and institutions are blacked out to preserve applicant confidentiality where possible.

Proposal Abstract as Submitted by Applicant

This is a proposal for a Type I Comprehensive Training Program in Stem Cell Biology to be based at [redacted]. Our program will train post-doctoral and clinical fellows across 27 departments at [redacted]. Pre-doctoral trainees will be recruited from 11 Ph.D. programs in the Schools of Medicine and Gerontology and in the College of Letters, Arts and Sciences. We have assembled a team of world-class scientists to teach two new courses developed through this initiative: an interdisciplinary, [redacted] -based course in the social, legal and ethical implications of stem cells, and a joint course among [redacted], its affiliate, [redacted], and [redacted] in stem cell biology. Each of these institutions is deeply committed to the involvement of students and faculty in this program beyond the scope of this funding. A strength of our program will be a high degree of interaction among students, 26 mentors and 36 instructors spanning all three institutions and facilitated by in-person, video, and web-based exchanges. We are requesting funding through this mechanism in order to recruit nationally 16 highly qualified individuals by the second year to be funded and designated as CIRM Scholars. In addition, these funds will support seminars and retreats that will build a larger community for stem cell research by involving and facilitating collaboration among students and faculty.

Benefit of this Program to California

This program will benefit the people and the state of California by providing high-quality training in the scientific, clinical, social, and ethical aspects of stem cell research to the scientists and clinicians who will develop and apply future therapies in this rapidly emerging field.

Summary of Review

This application proposes to create a comprehensive type I program that will draw pre-doctoral, post-doctoral, and clinical trainees from several departments (i.e., 20 clinical and 7 basic science departments, plus 11 Ph.D. programs). The program is strong but not fully developed yet, with a proposed integration of basic research and medical applications across three institutions. The program is highly interdisciplinary and the coursework is well conceived and described with great care, indicating a thoughtful and thorough process of selection and integration of different subjects. Considerable attention is given to assessment of progress in trainee research as well as their ability to present data and interact cogently with peers and mentors. The director is a productive investigator with internationally recognized contributions in developmental biology. He also directs the knockout mouse facility and the graduate council in the school of medicine. The director will be assisted by an executive committee and mentoring committees to oversee progress of trainees. The executive committee selects mentors based on the focus of their research efforts, publication record, grant support, and training

record. The institution is building a new dedicated space (90,000 sq. ft.) for stem cell research, which includes a new stem cell core to provide training in cell culture, derivation, maintenance, and differentiation of stem cells.

Overall Strengths and Weaknesses

The major strengths of this application are the very high quality of the program director, experience of staff in research training, the commitment of the institution to developing a major effort in stem cell biology, and the substantial pool of high-quality applicants. The proposal is very thoughtful, but it did not include some of the important antecedents to this program such as previous training programs and their results.

Recommendations

Highly meritorious and recommended for funding.

	Pre	Post	Clinical	Total
Fellows Requested:	5 to 10	2 to 4	2	9 to 16
Fellows Recommended:	5 to 10	2 to 4	2	9 to 16

	Year 1	Total
Budget Requested:	$ 706,143	$ 3,158,532
Budget Recommended:	$ 706,143	$ 3,158,532